REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-50 are in this case. Claims 1-6, 18-23, 39-41, 44, 47 and 50 have been rejected under § 102(e). Claims 7-13, 24-35, 38, 45, 48 and 49 have been rejected under § 103(a). Claims 10, 14-38, 42, 43 and 46-50 have been objected to. Dependent claims 19 and 20 have been canceled. Independent claims 1, 18, 25, 39 and 47 and dependent claims 8, 16, 17, 24, 30 and 46 have been amended. New independent claim 51 has been added.

The claims before the Examiner are directed toward a memory device that serves as a peripheral device of a computer, a computer system comprising one or more such devices, and associated methods. The device includes two memories and a single connector for operationally connecting the memories to a computer. One of the memories is directly executable and stores boot code that includes the code that is executed first by the computer when the computer is powered up, so that the computer system can power up despite not having a BIOS permanently connected to the system's bus. An embodiment of the device that includes a USB controller for supporting communication between the second memory and the computer is an example of a computer peripheral device that includes two separate components, a connector for operationally connecting the components to a computer, and a single USB controller for supporting communication only between one of the components and the computer.

§ 102(e) Rejections – Suzuki '139

The Examiner has rejected claims 1-6, 18-23, 39-41, 44, 47 and 50 under § 102(e) as being anticipated by Suzuki, US Patent No. 6,601,139 (henceforth, "Suzuki '139"). The Examiner's rejection is respectfully traversed.

Dependent claims 19 and 20 have been canceled, thereby rendering moot the Examiner's rejection of these claims.

Suzuki '139 teaches a stripped-down computer ("information processing apparatus") 1 that is turned into a special-purpose device (word processor, e-mail terminal, etc.) by the insertion in the removable-medium drive 10 thereof of a removable medium 2 that bears computer code for the desired application. The boot code of computer 1 is distributed between a basic medium access program (BMAP) in computer 1 and a boot area on removable medium 2.

The Examiner has proposed that Suzuki '139 anticipates the basic memory device of the present invention, as recited in independent claim 1, because removable medium 2 bears boot code in its ROM portion and also has a RAM portion that is the equivalent of a second memory. The crucial difference between the basic memory device of the present invention and removable medium 2 of Suzuki '139 is that the boot code in the first memory of the device of the present invention includes the code that is executed first when the computer to which the device is operationally connected is powered up. According to Suzuki '139, this code is in the BMAP, and not on removable medium 2. This is clear *inter alia* from column 7 lines 54-56:

> The present architecture needs an initial program called the BMAP, which automatically starts to operate when power is turned on.

and from column 11 lines 16-18:

> Whenever electric power is turned on in step S11, the BMAP is executed starting from the start point (point A) of a hardware initializing program.

Thus, the present invention is not anticipated by Suzuki '139. Furthermore, the present invention is not even obvious from Suzuki '139. There is neither a hint nor a suggestion in Suzuki '139 of any utility to putting all the boot code, including the initially executed code of the BMAP, on removable medium **2**.

While continuing to traverse the Examiner's rejections, Applicant has, in order to expedite the prosecution, chosen to amend independent claims 1, 18 and 39 in order to clarify and emphasize the crucial distinctions between the device, system and methods of the present invention and the teachings of Suzuki '139. Claims 1 and 39 have been amended to recite that the boot code in the first memory of the device of the present invention includes code that is executed first by the computer when the computer is powered up. Support for these amendments is found in the specification on page 1 line 22 through page 2 line 10, where the term "boot code" as understood in the present invention is defined:

> When PC **10** is powered up, CPU **12** starts fetching code instructions from an address that is predetermined by the manufacturer of CPU **12**. For example, in the original IBM PC that used the Intel 8088 microprocessor as its CPU **12**, that address was 0FFFF0H. In other microprocessors, the address is 0. In still other microprocessors, the address is selectable by a system designer from a small number of alternatives by strapping some of the pins of the microprocessor during power-up to specific configurations of high and low voltage values.
>
> PC **10** must include a component that responds to these initial CPU **12** fetch cycles and returns the correct commands (opcodes) that cause CPU **12** to start the powering-up, or "booting", process. If such a component is absent, then CPU **12** receives unpredictable or meaningless data that CPU **12** treats as executable code. Within a few machine cycles, CPU **12** either will be stuck or will be executing useless commands and will be unable to proceed beyond this stage. BIOS **14** is that component.
>
> BIOS **14** is a directly executable, non-volatile memory device, such as a read-only memory or a flash memory, that contains the initial code ("boot code") that CPU **12** must execute. (emphasis added)

16

Indeed, this definition of "boot code" shows that independent claims 1 and 39 were allowable as submitted over Suzuki '139. The purpose of the present amendment of claims 1 and 39 is to recite this definition explicitly in the claims.

Independent claim 18 has been amended to include the limitation of claim 19 that the computer system lacks a BIOS with a permanent operational connection to the system bus. This is in contrast to the system of Suzuki '139 in which the memory, such as flash memory **13**, that contains the BMAP, and so functions as a BIOS, is permanently mounted in computer **1**. Correspondingly, claim 19 has been canceled. Independent claim 47 recites the limitation of omitting a BIOS from the computer and so is allowable over Suzuki '139 as filed.

With independent claims 1, 18, 39 and 47 allowable in their present form, it follows that claims 2-6, 21-23, 40, 41, 44 and 50, that depend therefrom, also are allowable.

In addition, new independent claim 51 has been added. New claim 51 is claim 18 as filed, including the limitation of claim 20 that the first memory of each memory device is for storing boot code for the computer system and the limitation now introduced by amendment to claims 1 and 39 that the boot code includes the first code that is executed (by the processor of the system) when the system is powered up. Correspondingly, claim 20 has been canceled. New claim 51 is allowable for the same reasons that independent claims 1 and 39 as now amended are allowable.

§ 103(a) Rejections – Suzuki '139 in view of Solhjell '082

The Examiner has rejected claims 7, 45, 48 and 49 under § 103(a) as being unpatentable over Suzuki '139 in view of Solhjell, US Patent No. 5,542,082 (henceforth, "Solhjell '082"). The Examiner's rejection is respectfully traversed.

It is demonstrated above that claims 1, 39 and 47, from which claims 7, 45, 48 and 49 depend, are allowable in their present form. It follows that claims 7, 45, 48 and 49 also are allowable.

§ 103(a) Rejections – Suzuki '139 in view of Ma '735

The Examiner has rejected claims 8-10, 24-27, 29, 31 and 32 under § 103(a) as being unpatentable over Suzuki '139 in view of Ma, US Patent Application Publication No. 2004/0042735 (henceforth, "Ma '735"). The Examiner's rejection is respectfully traversed.

It is demonstrated above that claims 1 and 18 are allowable in their present form. It follows that claims 8-10 and 24, that depend therefrom, also are allowable.

The Examiner cites Ma '735 only to show that the "benefits of implementing a USB connection between two electronic apparatuses" is known in the prior art. However, the obvious way to connect a computer peripheral with two separate components to a computer via a USB connection is to provide either a common USB controller for both components or two separate USB controllers for the two components so that both components can have USB connections to the computer. By contrast, independent claim 25 recites the limitation that the computer peripheral includes only one USB controller and that that USB controller supports communication only between the first component and the computer, and not between the second component and the computer. This arrangement is not at all obvious from the prior art cited by the Examiner. It follows that independent claim 25 is allowable as filed.

With independent claim 25 allowable in its present form, it follows that claims 26, 27, 29, 31 and 32, that depend therefrom, also are allowable.

§ 103(a) Rejections – Suzuki '139 in view of Ma '735 and further in view of Solhjell '082

The Examiner has rejected claim 28 under § 103(a) as being unpatentable over Suzuki '139 in view of Ma '735 and further in view of Solhjell '082. The Examiner's rejection is respectfully traversed.

It is demonstrated above that independent claim 25 is allowable in its present form. It follows that claim 28 that depends therefrom also is allowable.

§ 103(a) Rejections – Suzuki '139 in view of Gene '751

The Examiner has rejected claims 11-13, 33-35 and 38 under § 103(a) as being unpatentable over Suzuki '139 in view of Gene, US Patent No. 6,757,751. The Examiner's rejection is respectfully traversed.

It is demonstrated above that independent claims 1 and 25 are allowable in their present form. It follows that claims 11-13, 33-35 and 38 that depend therefrom also are allowable.

§ 103(a) Rejections – Suzuki '139 in view of Ma '735 and further in view of Zimmer et al. '68

The Examiner has rejected claim 30 under § 103(a) as being unpatentable over Suzuki '139 in view of Ma '735 and further in view of Zimmer et al., US Published Patent Application No. 2005/0021968. The Examiner's rejection is respectfully traversed.

It is demonstrated above that independent claim 25 is allowable in its present form. It follows that claim 30 that depends therefrom also is allowable.

Objections

The Examiner has objected to claims 10, 16, 17, 18, 24, 25, 30, 46 and 47 as including acronyms that were not defined previously in the claims or in parent claims. Applicant presumes that the Examiner intended to object to claim 8 instead of to claim 10 and to claim 19 instead of to claim 18.

Claim 19 now has been canceled, thereby rendering moot the Examiner's objection to this claim.

In claims 8, 16, 17, 24, 25, 30 and 47, the objected acronyms have been expanded to their full definitions: USB = Universal Serial Bus, LPC = Low Pin Count and BIOS = Basic Input Output System, as kindly suggested by the Examiner. In claim 18 as amended, "BIOS" has been expanded similarly. In claim 46, "random access memory" has been substituted for "RAM".

The Examiner has objected to claim 23 for lacking antecedent basis for "respective operating systems". The Examiner's objection is respectfully traversed. Claim 23 depends, via claim 22, from claim 21 in which the respective operating systems are introduced.

The Examiner has objected to claims 11-15, 19-22, 26-29, 31-45 and 48-50 as depending from one of the aforementioned claims. Applicant presumes that the Examiner intended to object to claims 9, 10, 26-29, 31-38 and 48-50 on these grounds. In any case, the amendments of claims 8, 16-18, 24, 25, 30 and 47 as described above render moot the issue of which claims the Examiner should have objected to further.

The Examiner has objected to claims 14-17, 36, 37, 42, 43 and 46 as being based on rejected base claims. The Examiner has noted that claims 14-17, 36, 37, 42,

43 and 46 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

In view of the discussion above in the context of the § 102(e) and § 103(a) rejections, Applicant submits that the base claims from which claims 14-17, 36, 37, 42, 43 and 46 depend are allowable, making claims 14-17, 36, 37, 42, 43 and 46 allowable in their present form.

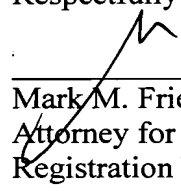## Amendments to the Specification

On page 4 line 8, "98", which is part of a trademark, was inadvertently typed in bold font along with the reference numerals in the paragraph beginning on page 3 line 21. This inadvertent typographic error now has been corrected.

A reference numeral (38) has been provided for the USB controller on page 11 line 13.

No new matter has been added.

In view of the above amendments and remarks it is respectfully submitted that independent claims 1, 18, 25, 39, 47 and 51, and hence dependent claims 2-17, 21-24, 26-38, 40-46 and 48-50 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

_____
Mark M. Friedman
Attorney for Applicant
Registration No. 33,883

Date: November 6, 2005